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R. O. COWLING, A.M., M.D., Editor.

H. A. COTTELL, M.D., Managing Editor.

THE USE AND ABUSE OF CHLORATE OF POTASSIUM IN DIPHTHERIA.

Dr. A. Jacobi, in his late treatise on Diphtheria, fixes the places which in his estimation the chlorate of potassium holds in the treatment of this disease, and reiterates and emphasizes the warnings which he gave over twenty years since against the immoderate use of this drug. Both the chlorate of potassium and the chlorate of sodium he regards as prophylactics and not as curative agents in diphtheria. Their power lies in their sway over the stomatitis and pharyngitis which exist so largely during an epidemic of diphtheria, and which, as he says, "must be referred to the epidemic sometimes as kindred diseases and sometimes as introductory stages only, which, however, do not, or do not yet, show characteristic symptoms of the disease." Such cases as these, whether due to the epidemic or not, demand the exhibition of chlorate of potassium; and "genuine diphtheria complicated with a great deal of stomatitis and pharyngitis," which is usually the state of affairs, also indicates its use; and its indication is here of scarcely less importance, because the diphtheritic exudation will spread with difficulty over the healthy surface, but attacks eagerly a surface denuded of its epithelium by catarrhal inflammation. So it happens with this preventive design Dr. Jacobi employs the chlorate of potassium or of sodium "in almost every case" of diphtheria.

The doses of chlorate of potassium rec-

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ommended by Dr. Jacobi are—for a child one year old, *a scruple* during twenty-four hours; at two or three years of age, *half a dram*; and for an adult, not more than *a dram and a half or two drams* during that period. He deems it of great importance that these limits should not be exceeded. Where the general effect of the drug is aimed at, the daily modicum may be divided into occasional doses; but for local effect it must be kept in almost constant contact of the parts. For this purpose he says "it is better that the daily quantity of twenty grains should be given in fifty or sixty doses than in eight or ten"! This is a slightly impracticable prescription perhaps, but it illustrates the views taken by Dr. Jacobi concerning the dangers of the indiscriminate use of the chlorate of potassium in fixing so specifically the laws of its dosage. He says, in fact, that he thus emphasizes the matter because of the attempts to introduce chlorate of potassium as the main remedy in diphtheria, and, "what is worse, in large doses." Seeligmüller gives to children three years old half an ounce daily. Weigert recommends six drams. The former modified his practice to some extent in later years, when he found that chlorate of potash might act injuriously on the heart. So, too, may it interfere with digestion; and if there is one disease which demands nutrition and conservation of nerve-force, it is diphtheria.

Dr. Jacobi follows with a number of cases where death came from overdoses of the chlorate of potassium; "a tablespoonful," "six drams," "an ounce," "a strong solution" being the quantities mentioned; taken

sometimes by mistake, sometimes what was intended as a gargle used as a drink. Three drams taken in one day killed a child three years of age in twenty-four hours (J. Lewis Smith), the child discharging "only a few drops of bloody urine." Dr. Fontain, of Iowa (Alfred Stillé), experimenting on himself with an ounce and a half of chlorate of potassium, died in a week of nephritis and enteritis. Nine cases of death in all are reported by Seeligmüller, Lacombe, Ferris, Stillé, Smith, Jacobi, Kracowizer, and Kuster, and several others which came nigh to death's door from chlorate-of-potash poisoning. Dr. Jacobi, in his conclusion to this part of his subject, says:

After all the previous remarks, the practical point I wish to make is this, that chlorate of potassium is by no means an indifferent remedy; that it can prove and has proved dangerous and fatal in a number of instances, producing one of the most dangerous diseases—acute nephritis. We are not very careful in regard to the doses of alkalies in general, but in regard to the chlorate we ought to be very particular. The more so as the drug, from its well-known either authentic or alleged effects, has risen, or descended, into the ranks of popular medicines. Chlorate of potassium or sodium is used perhaps more than any other drug I am aware of. Its doses in domestic administration are not weighed, but estimated; it is not bought by the dram or ounce, but by the ten or twenty cents' worth. It is given indiscriminately to young and old, for days or even weeks, for the public are more given to taking hold of a remedy than to heed warnings. Besides, it has appeared to me that acute nephritis is a much more frequent occurrence now than it was twenty years ago. Chronic nephritis is certainly met with much oftener than formerly, and I know that many a death-certificate ought to bear the inscription of nephritis instead of meningitis, convulsions, or acute pulmonary edema. Why is that? Partly, assuredly, because for twenty years past diphtheria has given rise to numerous cases of nephritis; partly, however, I am afraid, because of the recklessness with which chlorate of potassium has become a popular remedy.

The words of the great clinician should be well considered.

FIVE years ago today, and on a Saturday morning too, the NEWS started out on its way through the world. So far its journey has been tolerably successful. It has had its

jostlings and its crossings, seen something of the neglect and ingratitude and rebuffs of this wicked world, but after all its condition is quite cheerful. As it looks back it thinks that if it encountered rudeness at any point perhaps itself was not always over-polite; that if at any time it did not meet with the recognition it thought its due, possibly it demanded too much. Mayhap not every one it met knew what a charming good fellow it supposed itself to be. At any rate, taking fresh start this breezy, wintry morn, with score settled, flushed with hope and steadied with some conceit, all that is disagreeable passes from its mind. It remembers only the cheery faces, the hearty handshakes, the kindly words, and the warm hearts it has met with by the way, and these it looks for again.

If its fortune in worldly goods be not so great as it thinks its deserts should demand, may be many a worthy wayfarer along the same road is no better off; and it remembers, in fact, a number who used to travel along with it, and now do not, who possibly quit because they were much worse to do. And then does it not see when it rests at night, and takes out its slate and ciphers, how when all they in whose interest it journeys shall fulfill their promises (of course only forgotten for the while), what a snug sum there is in store for it, with which it can settle so joyfully with "mine host," and add to its ruder fare the cakes and ale, which so mellow one's views of human affairs.

And so it determines today to try and be better and stronger, to scan the world around it as it goes more thoroughly, to send out fresher and more important reports, that those who depended upon it before shall do so more and more, and that hosts of others may join them, and all shall say, We must push the NEWS along or we ourselves go back.

THE NEWS will hereafter be under the editorial care of Dr. R. O. Cowling. Dr. H. A. Cottell will assume the position of managing editor.

As was seen in our last issue, Dr. L. P. Yandell has retired from his position as associate editor of the News. It was with deep regret that we learned his determination to do so. To his talents, his industry, and discrimination the News owes much of its present success. His pen has been busy in every original department of the journal, and the selections from contemporaneous literature were chiefly of his choosing. The loss of so useful a colleague would be more severely felt if it were not that it is only his official connection which has been severed. As a contributor, Dr. Yandell will appear oftener now than his former position would admit. Personally the present editor bids Dr. Yandell a sorrowful adieu. The years in which they have been associated were marked by few disagreements concerning the policy of the journal; and they have labored together with a friendship which, starting in the playground a third of a century ago, has known no interruption.

Original.

A CASE OF INTESTINAL OBSTRUCTION.

BY J. A. LARRABEE, M.D.

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in Hospital College of Medicine.*

A drayman, aged about forty-five years, was seized on Wednesday night with colicky pain in bowels. After feeling well all day and having partaken of the evening meal with his usual appetite, he went out to a corner-pump to get a bucket of water. Pain "took him," as he said, and he went to the privy to get relief. No relief followed, and a physician was called in about midnight, who, under the dominant idea of malaria, prescribed twenty-grain doses of quinine and then left. He took two of the powders, which caused him to vomit and gave him no ease. His suffering becoming unbearable, I was telephoned to come early. When I saw him he had good voice, but his features showed the abdominal lines tightly drawn, and although a very brave man he could not help crying out at times. I immediately sought for and found the tender point with anti-peristaltic gurgle and movement. The

vomiting was by muscular contraction of the stomach, as is seen in infancy without preceding nausea, the water being expelled as from a Davidson syringe, a point of some considerable importance in the diagnosis of obstruction.

Dr. Cowling saw the case with me, and after a careful examination he agreed with me both as to diagnosis and site of the constriction or obstruction. The distended intestinal coils were plainly visible across the abdomen, and the gurgle perceptible to the hand from the anti-peristaltic action. It was agreed to continue the opium previously prescribed, and to reinforce its action by hypodermic morphia should pain become severe. A hot linseed-meal poultice was applied over abdomen. At next visit I found that the patient had been comparatively easy; still, however, ejecting fluids as soon as swallowed. Countenance somewhat less pinched and anxious. Thermometer placed in axilla registered 99°. At my morning visit patient presented anxious expression and was quite pale. Intestinal folds visible as before over abdomen; takes fluids eagerly, and in a few moments ejects all with force. Pain not so violent in character.

It was now agreed that an attempt to relieve the incarcerated gut be made, to accomplish which gentle but persistent hydraulic pressure was resorted to, and in order that he should be annoyed as little as possible a fountain syringe was used. Messrs. Smith and Fisher remained with the patient for several hours, during which time about six quarts of water had entered the intestine from below upward, the body being placed so that none had escaped. At this point considerable pain was felt, but no relief. This injection was still retained at the time of my evening visit. The abdomen was also found to be distended with gas; tympanitis and borborygmus present. The vomited matter was semi-fecal.

Pain had increased, and at times he vomited, as on the previous day; countenance decidedly pinched; thermometer registered 104.7°, which in the morning (taken by Dr. Cowling) was 98.5°.

On account of this sudden but not unexpected change for the worse, the evening consultation was hurried. At this time the question of gastrotomy was discussed, but with mutual consent was set aside. With a view to relieving the gaseous distension of the intestines, plainly visible through the abdominal parietes, the needle of the aspirator was plunged into the intestine and the

air-pump attached. Seven pints of odorous fluid were withdrawn. On withdrawal of the needle a desire was felt to pass stool, which we hailed with the hope of relief. Some of the water which was injected into the lower bowel during the day passed, but no fecal matter. He now began to complain of severe pain, notwithstanding he was just emerging from the anesthetic, and had three quarters of a grain of morphia hypodermically. I last heard from him alive at 8 P.M. Two hours after operation he was in great agony, and died before relief could be given to him.

The post-mortem examination showed intestines enormously distended with fluid and gas, so that it was with great difficulty the seat of the obstruction could be found. The end of the appendix vermiformis was black and swollen, and was attached firmly to the abdominal walls. In the loop thus formed lay two folds of the ilium, in double twist, black and mortified. The intestine for six or eight inches leading to the constriction was deeply congested. The cecum also was dark and contained feces. Within the appendix was some hard substance, the nature of which was not made out.

From this case the following deductions may be drawn:

1. There was a previous inflammatory trouble involving the appendix vermiformis, as a result of which that portion of the cecum became firmly adherent to the abdominal wall. This was marked by soreness and localized peritonitis, which lasted one week, and was not treated by a physician. Five weeks now elapse, during which time he frequently spoke of an uneasy feeling, which he located about the navel. He then, after eating a hearty supper, goes to the pump to get a supply of water before retiring. In pumping he throws the loop of intestine through the ring-like opening made by the adherent appendix and the cecum. Immediately peristaltic action is excited, and the desire to stool was so strong as to be irresistible, causing him to put down his buckets of water and hasten to the privy. No stool is passed, but violent colicky pain commences with anti-peristalsis, soon producing vomiting, which symptoms are steadily kept up to the time of his death on the fourth day.

The lesson taught by this case concerning the operation for gastrotomy is exceedingly profitable.

2. The diagnosis in this case was made sufficiently early (at the first visit), and strength-

ened by the symptoms from hour to hour as the day passed on. The site of the obstruction was also marked out and proved by post mortem to be correct. The point selected for puncture was also correct, and the puncture shown to be in the middle of the caliber of the intestine, nevertheless the section-cadaveris showed conclusively the utter impracticability of gastrotomy for relief, as it would have been quite impossible to reach the strangulated and congested intestinal loop without most unwarrantable extension of the incision and handling of the intestine and its peritoneum.

3. The fluid withdrawn might at first be considered as a move in the right direction, as the further abstraction of fluid through the same aperture caused the incarcerated and blackened loop to slip back from its bands, but an after consideration will, I think, cause serious reflection upon the propriety of such a proceeding. In the first place it is practically impossible to remove the fluid or gas in the intestinal coils away from the site of the puncture. Seven pints of the contents of the distended ilium were removed, when fluid ceasing to flow the aspirator was withdrawn.

In the next place the distension of the gut from the point of constriction prevents the closure of the aperture, which continues to pour out gas and fluid into the peritoneal cavity. At the post mortem this aperture was readily found, and upon disturbing the coils of intestine fluid *injesta* poured out in a stream through the opening. The abdomen was filled with the same fluid, which was exuded before death.

Whatever, therefore, may be said as to the harmlessness of aspiration in other vital parts, this much is certain, that puncture of the intestines under these or similar conditions is not only unnecessary, but positively unwarrantable. The puncture of the intestine, as shown in the section-cadaveris, was most successfully performed as to the best point and correctness of puncture, being in the center point of the circumference, and not transfixing, it would be a difficult matter to do as well a second time, as it is by no means an easy matter to puncture an intestinal fold through the abdominal wall, the resiliency of the gut prevents the introduction of the needle, rendering it very difficult if not impossible.

In conclusion, permit me to say that I have had a somewhat unusual experience in obstructive diseases of the intestines, and I would be glad to be able to give a summary

of a score of cases. I am, however, able to give note of fourteen, beside the present case, which have fallen under my personal observation, and in which I have diagnosed intussusception. Ten of these cases have been verified not only as to diagnosis, but also as to the site of the obstruction by post-mortem examination. One only by ante-mortem examination, by gastrotomy or laparotomy. One passed from my care into the hands of a fellow-practitioner during treatment. The diagnosis was sustained, and in the course of a few days spontaneous relief was obtained. In another eighteen inches of ileum (strangulated and invaginated by the cecum) passed away by sloughing. Death occurred subsequently by renewed peritonitis, due in all probability to escape of fecal matter into the abdomen. In the fourth case death occurred, but no post mortem could be obtained.

Perhaps this experience may justify me in stating that I believe I am able to diagnose intussusception from fecal impaction with tolerable certainty, and withal I am not willing to take the ground recently taken by Dr. Briggs in his excellent paper as to the hope held out by surgical interference in intestinal obstruction.* I have never witnessed the slightest benefit from hydraulic pressure, either by means of a Davidson or fountain syringe. The distress is increased by the full injection of water to the capacity of the intestines. I have looked in vain for the promised gurgle of reduction, and am inclined to think those cases relieved by this means have not been correctly diagnosed, and that such cases are fecal impaction or paralytic zone of intestine. I am more fully convinced that true obstruction disease of the intestines is by no means rare in general practice, but occurs with greatest frequency in childhood and age, both of which conditions tend to produce volvulus, twist, and invagination by relaxed tone and flatulent distension. The cases among infants occurring in the convulsion of death not giving rise to symptoms during life are of course not included in this report, and are only accidentally found when post mortem is made for other diseases.

I am also satisfied that the treatment, which indeed amounts to little, is quite as well without medication as with; and I have never found a condition which, save in one case, I considered could have been relieved

by surgical procedure. I would therefore recommend in the first place great care in the diagnosis by long and careful examination of physical and rational signs, especially to insist upon knowing the exact time and manner of occurrence. The elimination of other causes of obstruction is also of great importance. The seat of obstruction may be known to be high up in the small intestine or low in the large bowel by the early or late occurrence of vomiting and collapse. Also by diminished or normal quantity of urine passed. The site may often be fixed upon by the ear fixing the point at which anti-peristaltic action is established. Having determined in any case that there is an invagination or twist, I would advise the following treatment: Looking to the separation of the invaginated or twisted portion, and the preservation of the caliber of the intestine by adhesive inflammation. A forlorn hope it must be in most cases, but I believe as likely to succeed as surgical interference.

The judicious practitioner will of course object to the use of purgatives until he has made his diagnosis, and never yield to the temptation to resort to them after diagnosis of permanent obstruction is settled upon. The abdomen should be smeared with warm oil, to which a little turpentine is added. This should be followed by a large linseed-meal poultice, both of which are to be kept up throughout the case. Thirst is to be relieved by small quantities of water thrown into rectum, but all attempts at hydraulic pressure are not worth trying. Opium by hypodermic or stomach administration is to be steadily kept up, the only guide to dose being the effect upon the patient. A semi-narcotic condition is to be maintained. Peptonized fluid beef may be injected into the rectum if the case continue long enough to require it. The patient is better sustained by opium.

Under this management a twist, a volvulus, incarceration, or invagination of the intestine would result almost certainly in the death of the individual. A similar result would attend, I believe, any attempt at surgical relief after the case admits of little or no doubt as to mechanical obstruction. There is, moreover, a chance which has, I believe, occurred quite as often as instances of surgical relief that the incarcerated portion may slough off, leaving an entire, shortened, and patulous canal. This occurred but once in my own private practice. In such instances the adhesive inflammation set up

*The reader is referred to the excellent paper on Surgical Treatment of Intestinal Obstruction, by W. T. Briggs, M.D., Nashville, Tenn., read before the Tri-State Medical Society.

around the invagination helps to secure a more perfect union and coaptation of the intestinal ends than could possibly be done with needle should the intestine be found sphacelated. Moreover, in the management should the patient die, as it is expected he would, we have the no small satisfaction that we have not been instrumental in adding to his sufferings by useless and experimental torture. Should the case prove, as must sometimes happen, not to be a mechanical obstruction, these means are best calculated to relieve the impaction.

LOUISVILLE.

Reviews.

On the Use of the Cold Pack followed by Massage in the Treatment of Anemia. By MARY PUTNAM JACOBI, M.D., and VICTORIA A. WHITE, M.D. New York: G. P. Putnam's Sons, No. 182 Fifth Avenue. 1880. Octavo, pp. 76.

The brochure is made up of three papers which appeared in the Archives of Medicine. It contains the account of eleven cases of anemia treated by the "cold pack followed by massage" and other means, and commentary thereon. The "other means" included iron, milk, Leube's extract, cod-liver oil, etc.; and in the absence of other evidence the good results recorded might be ascribed to these well-known agents. But this is what Mrs. Jacobi sets out to do—to estimate what was the part played by the cold pack. She puts it foremost—ranking even above massage, which she has thought sufficiently of to include in the title. Used after the manner of Weir Mitchell, combined with rest and not with the cold pack, she thinks, in fact, that the results of massage have been exaggerated. *Passim* we think it difficult to exaggerate the beneficial results of massage; but Mrs. Jacobi is as fair as could be expected of any *mortelle* who had started out to test by clinical experiment a preconceived idea based on physiological induction—the value of a remedy. She was led to use the cold pack in the treatment of spanemia from the belief that it would tend to increase the rapidity of tissue-metamorphosis, and would be expected to indirectly increase assimilation, and therefore promote absorption of nutritive material from the digestive tract.

The cases reported show in some instances wonderful improvement—increased weight, improved color, restored strength, the return of catamenia after years of absence,

and other results which depend on appetite, digestion, and health. All of these patients had received ordinary tonic and constructive treatment without avail.

The method of the "cold pack" is to envelop the patient in a wet sheet, this surrounded by a dry one, and that by blankets. Six of these are mentioned as being used in one case. These various envelops are to be drawn tightly around the patient's body, and to remain twenty minutes or an hour or more, according to the ability of the patient to stand it. An hour is the usual time daily or every other day. The pack is followed by massage.

The elimination of urea is increased, even doubled, during the administration of the pack, and afterward decreased. The tabular statements showing this fact, together with other results of urinary analysis, figure very largely in the book. Not so the revelations of the hematometer, which strangely enough "circumstances" prevented the exact medics from using.

Dr. Jacobi and Dr. White have done good service in this book. Any one who contributes aught to the relief of the cruelly-abused stomach should be ranked as a benefactor. The "cold pack" has long been a stand-by with the water-curers, for whom we have had a sneaking regard. Mrs. Jacobi has succeeded so well in this instance that we trust she will invade their domains again. There is no telling what virtues lie hid in water, cold or warm, and, with the advantages of a physiological education, what wonders it may achieve in rational medicine!

Ophthalmic and Otic Memoranda. By D. B. ST. JOHN ROOSA, M.D., Professor of Ophthalmology in the University of the City of New York, Professor of Ophthalmology and Otology in the University of Vermont, Surgeon to the Manhattan Eye and Ear Hospital; and EDW. T. ELY, M.D., Assistant to the Chair of Ophthalmology, University of the City of New York; Assistant Surgeon to Manhattan Eye and Ear Hospital; Surgeon to Charity Hospital. Revised edition. New York: William Wood & Co. 1880. For sale by John P. Morton & Co., Louisville.

This tiny volume, as large as your hand, is one of the most useful works of its kind that has issued from the press. It is a book especially adapted to the medical student's wants. It is condensed, clear, and inexpensive. Both its authors are eminent in ophthalmic and otic matters. Its senior author certainly stands without a superior in skill and fame.

L. P. Y.

A Treatise on Therapeutics. Translated by D. F. LINCOLN, M.D., from French of A. TROUSSEAU, Professor of Therapeutics in the Faculty of Medicine of Paris, Physician to the Hôtel Dieu, Member of the Academy of Medicine, Commander of the Legion of Honor, ex-Representative of the People in the Constituent Assembly, etc.; and H. PIDOUX, Member of the Academy of Medicine, Honorary Physician to the Hospitals, Inspector of Eaux-Bonnes, Honorary President of the Société de Thérapeutique, Honorary Member of the Royal Belgian Academy of Medicine, etc. Ninth edition, revised and enlarged, with the assistance of CONSTANTINE PAUL, Professor Agrégé in the Faculty of Medicine of Paris, Physician to the Hôpital St. Antoine, Secrétaire-general of the Société de Thérapeutique. Vol. III. New York: William Wood & Co., 27 Great Jones Street. 1880. For sale by John P. Morton & Co., Louisville.

All that we have said of the excellences and defects of the previous volumes of this work are applicable to this Vol. III. For practitioners properly grounded in modern medicine it is both interesting and instructive. For medical students it is bad. The average student is far more likely to be led astray by an obsolete book—especially if it be, as this is, the work of a great man and a graphic writer—than he is to be convinced aright by the most earnest teacher. Printer's ink exercises a mysteriously potent influence over the callow human intellect. L. P. Y.

Text-Book of the Physiological Chemistry of the Animal Body, INCLUDING AN ACCOUNT OF THE CHEMICAL CHANGES OCCURRING IN DISEASE. By ARTHUR GAMGEE, M.D., F.R.S., Professor in the Victoria University, Manchester; Brackenbury Professor of Physiology in Owens College. With illustrations. Vol. I. London: McMillan & Co. 1880. For sale by John P. Morton & Co., Louisville.

Physiological chemistry is here considered from a medical and biological standpoint. The chemical composition and the chemical processes relating to the elementary tissues of the body are very thoroughly treated. This volume is complete in itself, though the author proposes to bring out a second volume within the year. Dr. Gamgee occupies a position of distinction in his own country, and his reputation, by no means inconsiderable in America, will be greatly augmented by this scholarly and learned work.

L. P. Y.

THERE is much sickness in Rome. An applicant to a community of French sisters, who attend the sick, for a nurse was informed that every sister was already engaged.—*Brit. Med. Jour.*

Books and Pamphlets.

ANNUAL REPORT OF THE SURGEON-GENERAL OF THE UNITED STATES ARMY. 1880.

BIENNIAL REPORT OF THE DIRECTORS AND WARDEN OF THE KANSAS STATE PENITENTIARY, TO THE GOVERNOR OF KANSAS, FOR THE FISCAL YEARS 1879 and 1880.

REPORT OF THE BOARD OF HEALTH OF THE STATE OF LOUISIANA, FOR THE YEAR 1880. Containing Report of Joseph Jones, M.D., President, together with Official Correspondence, with National and Local Boards of Health, and Quarantine and Sanitary Rules and Regulations of the Board of Health of the State of Louisiana.

ON A CASE OF ANEURISM OF THE SUBCLAVIAN ARTERY TREATED BY AMPUTATION AT THE SHOULDER-JOINT AND THE INTRODUCTION OF NEEDLES INTO THE SAC. By Christopher Heath, F.R.C.S., Holme Professor of Clinical Surgery in University College, London, and Surgeon to University College Hospital. Read January 27, 1880. From Vol. LXIII of the Medico-Chirurgical Transactions, published by the Royal Medical and Chirurgical Society, London.

Miscellany.

FILARIA DISEASE.—The parasitic theory of the causation of elephantiasis has been subjected during the last two years to a considerable amount of criticism, favorable and unfavorable (*British Med. Journal*). It has been accepted by some, and those the best acquainted with tropical disease, as supplying the key of what before was mysterious and a sealed book; others again have suspended judgment in the matter, considering the evidence not yet complete; while a third section, including eminent pathologists, such as the late Dr. Tilbury Fox, deny it altogether. In the eighteenth issue of the valuable half-yearly medical reports of the Chinese Imperial Maritime Customs, lately received from Shanghai, Dr. Manson, of Amoy, who is well known as one of the most earnest workers in this field of pathology, gives a striking account of his further researches into the question. Perhaps the most remarkable of his results has been the discovery of the periodicity observed by the embryo of *Filaria Bancrofti* in the blood.

He observes that it had always seemed strange to him that the *filaria sanguinis hominis* had escaped observation in the blood until Lewis found it there in 1872. "One would think there were hundreds of workers in India, and in different parts of the tropical world, who must have searched the

human blood in the aggregate thousands of times; and, notwithstanding this, the parasite, which in some places is present in every tenth individual, was overlooked or never found for so many years." The explanation of this Dr. Manson now offers. Most workers with the microscope pursue their investigations during the hours when the light is good; that is, during the day. Dr. Manson shows that this is the wrong time to look for filariæ. Finding that different results were obtained by his assistants according as they worked during the day or after dark, he made a systematic examination every four hours of several patients, with the view of ascertaining if this periodicity was maintained in every case. Examination of the patients in this way showed that unless there is some disturbance, as fever, interfering with the physiological rhythm of the body, filaria embryos invariably begin to appear in the circulation at sunset, and their numbers increase gradually till about midnight; during the morning they become fewer by degrees, and by nine or ten o'clock in the forenoon it is a very rare thing to find one in the blood. Till sunset they appear to have completely deserted the circulation, but with the evening they come again, to disappear in the morning, and so on with the utmost regularity every day, and from day to day. The circle is completed every twenty-four hours, and there are no longer spells of absence than from morning until evening. For the meaning of this Dr. Manson thinks we have not far to look. "The nocturnal habits of filaria sanguinis hominis are adapted to the nocturnal habits of the mosquito, its intermediary host, and is only another of the many wonderful instances of adaptation so constantly met with in nature."

The conclusions at which Dr. Manson arrives, after his study of the subject, are the following, which deserve serious attention: The parent filariæ live in the lymphatics. This is proved by their young and ova being found there even when absent from the blood. They do not live in the glands, but in the lymphatic trunks on the distal side of the glands. (Lewis and Bancroft found filariæ in tissues some distance from any glands.) They are oviparous. The eggs are carried by the lymph-current to the glands; and, being too large to pass ($\frac{5}{16}'' \times \frac{1}{16}''$), they are arrested there till hatched. After hatching, the free embryo passes along the lymph-vessels and enters the general circulation. Resting in some organ during the day, it circulates with the blood during the

night, whence the mosquito abstracts it and acts as its intermediary host. In certain cases the ova or embryos produce obstruction of the lymph-circulation through the glands, either directly by their size or indirectly by causing inflammation. If the obstruction be partial, varicosity of glands and of afferent lymphatics result; but by means of the anastomoses the lymph-circulation is continued, carrying the embryos with it into the blood. Lymph-scrotum, or chyluria, or varicose groin-glands, with hematozoa, are therefore the symptoms of partial obstruction of the lymphatics. If the obstruction be complete, one or the other of two things happens: 1. The accumulating lymph so distends the vessels that they rupture, and a lymphorrhagia results, which is more or less permanent. In this case the lymph does not quite stagnate; but being able to circulate, though in a retrograde manner, it remains fluid. The symptoms of this form of obstruction are therefore lymphorrhagia from scrotum or leg, varicose glands, and filaria-embryos in glands, and perhaps in discharged lymph, *but none in the blood*. 2. If the lymphatics fail to rupture, there is a complete stasis of lymph, and excessive accumulation in the tissues upon the distal side of the glands; solidification of the glands and tissues and elephantiasis result. No embryos are found in the blood, as none can pass the glands; and the parent worm or worms probably die choked, so to speak, by the stagnant and organizing lymph and their own young. Consequently in pure elephantiasis, as a rule, no embryos can possibly be found in the blood or in the lymph of the glands.

A SIMPLE EXPLANATION.—Dr. John Brown, of Edinburgh—he who introduced us all to dear Rab and his Friends—tells the following anecdote: Walking through the grounds of a lunatic asylum one morning he was accosted by one of the inmates. "You don't know me," said the lunatic. "No," said Dr. Brown; "who are you?" "I am Moses, the lawgiver," he replied. Expressing his pleasure at meeting the distinguished legislator, Dr. Brown continued his walk, and after a while fell in with the lunatic again. "You don't know me," he said. "No," said Dr. Brown again; "who are you?" "I am the Emperor Napoleon," he answered. "But," said Dr. B., "it was only fifteen minutes ago that you told me you were Moses, the lawgiver." "Certainly," replied the lunatic; "*that was by another mother?*"

THE INFLUENCE OF MUSIC ON THE CIRCULATION.—The following are the conclusions drawn by Dogiel as the result of his experiments (*British Med. Journal*):

1. Music has an influence on the circulation, both of men and of animals. 2. The blood-pressure rises at one time and falls at another. These variations depend chiefly on the influence of the auditory stimulation on the medulla oblongata, which seems to have a connection with the auditory nerve. 3. The action of musical sounds and whistling upon animals and man is chiefly expressed by acceleration of the cardiac contractions; hence the automatic cardiac ganglia act more energetically. 4. The variations in the circulation coincide with the changes in the respiration, although they may be observed to take place independently of the variations in the respiration. 5. Strychnine increases the action of auditory impressions upon the circulation; while curare, chloral hydrate, alcohol, and morphia (in a certain stage of the narcosis) diminish it. 6. The variations in the circulation are dependent upon the pitch and loudness of the tone, and also on its *timbre*; but they depend also on the individual constitution of men and animals; and in the case of the former the nationality plays an important part.

These results are just what may have been expected from a consideration of our knowledge of the effects of stimulation of other sensory nerves. These facts confirm the correctness of the views of Aristotle, Plato, and Pythagoras as to the necessity of the cultivation of music by children; and they indicate that music may be useful as well as injurious in certain diseased conditions in men.

BISHOPS AND DOCTORS.—I am not ashamed to say I have a son a doctor.—*Speech of the Bishop of Liverpool to medical men.*

How kind of the Bishop, and how patronizing,
And yet to his Punch 'tis a little surprising
That, speaking to medical men there in session,
He dared speak of shame and a noble profession.
A bishop looks after our souls, but how odd is
The sneer that's implied at the curers of bodies;
For surely it would be no hard task to fish up
A hundred brave doctors as good as the Bishop.

—*Punch.*

DEATH OF SIR BENJAMIN C. BRODIE.—Sir Benjamin Collins Brodie, the second baronet of that name, late Professor of Chemistry in the University of Oxford, died, November 24th, at Torquay, Devon, in the sixty-fourth year of his age.—*Brit. Med. Jour.*

THE ELECTRIC LIGHT.—The electric light is once again coming into the prominent notice of Londoners, who, except on Waterloo Bridge and along the Embankment, have lately had small opportunities of seeing it in action. It has for a time been employed for lighting the Victoria Station of the District Railway, and the results have been so far successful that it is to be brought into immediate use also at Charing Cross Station, and shortly after at Earl's Court. The system under trial at these places is the Jablochkoff.—*Med. Press and Circular.*

BARTHOLOW'S PRACTICE OF MEDICINE.—We are sorry to see that the author has had occasion to say in his "preface," "With one or two unimportant exceptions, I have had personal charge of the maladies treated of in this work, and have made them the subject of clinical demonstration and *post-mortem investigation, either privately or in public lectures.*" The portion of the sentence we have italicized we are confident the author wrote without fully weighing his words.—*Virginia Med. Monthly.*

BROMIDROSIS the Germans more graphically call "stinking foot-sweat," says the Boston Medical Journal.

Selections.

Food and Drink.—James Alex. Russell, M.A., M.B. etc. (*Medical Press and Circular*):

Dr. Russell prefaced his address by stating that food was required for three chief purposes—to replace the waste continually going on of the body; to supply and maintain warmth or animal heat; and to supply force for performing work. Their sources of food were mainly from the animal and vegetable world. In that they differed from the plants, which could take up the ultimate elements and convert them into food for themselves. It was possible that they might eventually have the power of building up the body with elements that just now were furnished to them by either the animal or vegetable world. He looked forward to the time when their chemists, by synthesis of the elements, would be able to give them the elements of their food prepared without the intervention of plants or animals. It was easy to resolve the food into its original elements, but difficult to build them together again. This the lecturer showed experimentally by extracting the water out of sugar, and leaving as residue only the black carbon. Now, if chemists were able to put water and coke together so as to make sugar, they should, instead of going to the West Indies, go to their own coal-mines for their sugar. The chief elements in their food were five in number: (1) water, (2) albumen or albuminoid substances, (3) sugar and starch or carbo-hydrates, (4)

fats, and (5) salts. Albuminoid substances were found in a concentrated form in meat; it was contained also in certain vegetables, but then it was not so accessible to them. Containing, as they did, a large proportion of nitrogen, the function of albuminoid substances was to repair the tissues of the body. It alone had that power. If animals were fed on food that had not albuminoid substances in it, they lost health and died of what physiologists called nitrogen starvation. Fats, although not tending directly to the building up of the body, were one of the great sources of animal heat and force for performing work, and they also tended to promote the digestion of other elements of diet. Butter was the most agreeable way in which fat could be taken by itself; and the lecturer also commended "butterine," which was made from mutton suet and milk, as a cheap and efficient substitute for the poorer classes for butter itself. The carbohydrates had no nitrogen in them, and therefore could not nourish the tissues of the body; but within the body they were changed into fat, and largely assisted in the supply of heat and force. Starch in a raw condition required to be cooked before it could be digested by man, because the granules required to be broken before the gastric juices could act upon them. Starch was largely digested by the active principle contained in the saliva of the mouth; and therefore it was very important that farinaceous food should be slowly masticated in the mouth—not for the purpose of breaking it down so much as for the purpose of intimately mixing it with the saliva, the active principle in which rapidly changed it into the form of sugar. As infants up to the age of seven months hardly secreted any saliva, when they were crammed with corn, flour, or other farinaceous foods it meant that they got something which they could not digest. The consequence was the high death-rate of infants of that age. All were aware how necessary salt was in promoting good digestion. The lecturer next pointed out the necessity there was for not only having all these elements present in food, but present in certain proportions, and remarked that there was no one article of food he was aware of in which they were perfectly balanced except milk, and that was only for young people. Milk was not a properly-balanced diet except for young people. It contained too much nitrogen for elderly people. Young growing people, however, required more nitrogen than grown-up people. Where people lived on an unbalanced diet, the quantities they required to eat of, say, either bread or meat alone to get the balance was enormous. That was one of the reasons why the natives of the Arctic regions and of Africa could eat so much flesh. The proportions required were: albuminoids two and a half ounces, fats one ounce, carbo-hydrates twelve ounces, salts one half ounce. One pound of water-free food was required daily to sustain healthy life. An unbalanced diet was productive of serious diseases.

Gout in the rich was the result of an excessive nitrogenous diet, taken in the form of too much flesh. The poorer classes, on the other hand, suffered from a diet containing too much carbon. Diet also required to be modified in accordance with the work. That which sufficed for health in idleness would not suffice for health under a stress of labor. Thirty-one ounces of water-free food was required for men who had to do hard work; thirty-five to forty ounces for very hard work, or as much as men could do. The mistake made in the Crimea was in sending men there to do hard work on the same diet as was found

quite satisfactory for them at home doing nothing. That to the country, as they knew, was a costly dietetic experiment. Among all force-producing articles oat meal was placed at the head. Great political facts sometimes depended on dietetics. He heard a celebrated politician and chemist say, in reference to Ireland, that the human stomach was just capable of digesting a sufficient amount of potatoes to keep an Irishman living in idleness, but that it was not capable of digesting the quantity required to enable him to do any work. He wished to mention one fact in regard to milk diet for the young—that it had been determined by experiment that children grew exactly four times as fast when fed on milk as when fed on tea or coffee.

Speaking to the question when should food be taken, Dr. Russell recommended that working people should take their food before beginning work. The greater amount should be taken at breakfast, or at an early dinner. Children required to be fed oftener than grown-up people, probably four or five times a day. Three diets per day, and for many people two, were quite sufficient for adults.

After insisting on the necessity of food being properly cooked, the lecturer gave figures to show the time different foods required for digestion in the stomach. Among others mentioned were barley, two hours; beans, two and a half; bread, three and a half; potatoes, three and a half; and cabbage, four; tripe, one; lamb, two and a half; roast beef, three; mutton, three and a quarter; roast pork and salt beef, five and a quarter hours.

On the subject of drink, the lecturer discussed the relative merits of stimulants. There was no doubt, he said, that alcoholic liquors should be abjured by growing people, except under medical advice; and the only time that they could not be proved to do marked harm was when taken largely diluted, along with food, and when the day's work was done. Beef, tea, and coffee were far better in every way to work upon than any form of alcoholic liquor. A drink he recommended to working men who had hard manual labor to perform was a thin oat-meal gruel made of oat meal and water with a little sugar added.

Rectal Alimentation.—At the meeting of the French Association for the Advancement of Science at Rheims, M. Catillon read a paper on Alimentation by the Rectum, in which he stated that he had fed two dogs during two months with injections of eggs. The first, which had eggs only, lived with difficulty, with considerable loss of weight; the other, in which the injected eggs were mixed with glycerin and pepsin, lived in an apparently normal manner, weight and temperature being constant. After thirty-seven days, the pepsin having been stopped, the animal lost weight, and the temperature fell from 102° F. to 99° F. It is therefore apparent that in order that nutrition should be properly performed by the intestine digestive ferments must be associated with the food—that is to say, they must be transformed into peptones. *Med. Press and Circular.*

Belladonna in Salivary Fistula.—Dr. James Allan writes to the British Medical Journal: In two cases of salivary fistula from injury to the Stenonian duct—one after incision, the other due to a stab—the application of belladonna extract, with glycerin, over the parotid gland of the affected side was followed by arrest of glandular secretion. The fistule then speedily healed without interference.

An Item of Evidence Bearing on the Theory of the Duration of Pregnancy Advocated by Cederschjöld.—G. Ernest Herman, M.B. (Medical Times and Gazette):

A patient aged thirty-two, who consulted me for a trifling illness of no importance in this connection, told me that she had always menstruated with the greatest regularity, the flow recurring once in every calendar month—i. e. two or three days over the four weeks. She mentioned this because, knowing the usual period to be a lunar month, she thought her own case in this respect singular. She had had one child; and it therefore occurred to me that her case might possibly serve as a test of the theory suggested by Cederschjöld and advocated by Lowenhardt (*Archiv für Gynäkologie*). I therefore asked her if she could tell with exactness the duration of her pregnancy. She told me she was married on April 16th, having menstruated about a fortnight before. The catamenia never recurred again till after her confinement; and she therefore believed she had become pregnant immediately after marriage. The child was born on January 10th, and was a large and fine boy. The duration of pregnancy here, therefore, was two hundred and sixty-nine days. Now, if the theory of Cederschjöld—viz. that the duration of pregnancy in any given case is to be found by ascertaining the patient's usual menstrual period (i. e. the time elapsing from the beginning of one catamenial flow to the beginning of the next), and multiplying the number of days by ten—were correct, as this patient habitually menstruated every thirty or thirty-one days, her gestation ought to have lasted three hundred or three hundred and ten days. It is only needful to add that the patient was an intelligent woman, who had no reason whatever for making false statements in the matter.

Of course one case standing by itself does not prove much, but as cases in which the duration of pregnancy can be ascertained at all are not met with every day, and still less often cases bearing on the theory in question, I have thought this one worth putting on record.

Cold Feet.—It is, as we have often labored to show, a mistake to suppose there is any warmth in clothes. Animal heat is the direct result of changes going on within the body itself. Nutrition by food, and the discharge of energy by exercise, are the efficient causes of heat (London Lancet, November 27th). Clothes "seem" to warm because they prevent the cold air and objects with a capacity for heat which surround the body from attracting the heat generated within its organism. The clothing is simply an insulator. It follows that it should be light in weight, and above all things that it should permit the free and full circulation of blood through every part of the system—to the end of every finger and toe—and that the muscular apparatus of the extremities should be in perfect working order. If we will wear foot-coverings, whether boots or stockings, which compress the feet and render the separate action of each toe impossible, it is simply absurd to expect to be warm-footed. Heat is the complement of work and nutrition; and if a part of the organism is so bound that it can not work and its supply of blood is limited, it must be cold. The resort to stouter and heavier clothing under such circumstances is simply ridiculous. Generally it is the stockings that compress the feet. The garter acts as a ligature, and dimin-

ishes the blood-supply, while the stocking itself acts as a bandage, and impedes the circulation through the extremity. Let any one who doubts this try the effect of wearing what is called a "well-fitting"—that is, a tight kid glove in cold weather. Hard, unyielding foot-cases, such as stout boots with no space for the toes to play and no spring for the natural action of the arch of the foot, increase the evil. The first conditions of warmth are, therefore, free action and a full blood-supply. These remarks apply chiefly to the day. At night the wearer of tight and rigid foot-coverings reaps the recompense of his imprudence by sufferings which are wholly needless. When the body is placed in the recumbent posture the force of the blood-pump—the heat—is economized, and the current grows both weaker and slower. The necessary result of this change is that there seems to be a tendency to coldness in the state of sleep, and those who suffer from cold feet seek to remedy this discomfort by heaping clothes on their extremities. They forget that the way to maintain animal heat is to incite the system to work. By judiciously and rapidly bathing the feet in cold or cool water before going to bed, and then rubbing them so as to promote the circulation, the blood-supply of the extremities may be augmented; and by the avoidance of heavy and what is called warm bedclothes on the feet, the force of the circulation in the organs will be maintained far more effectually, and with incomparably greater comfort, than when the coverings are doubled and trebled, and even supplemented by artificial heat because the feet are cold! There are, of course, cases in which a different method of procedure must be adopted; but when the seemingly healthy resort to heavy and hard foot-coverings by day and artificial foot-warmers by night, it should be under express medical advice. The normal ways of procuring warmth are the best, namely, nutrition and work.

A Spinal Root of the Optic Nerve.—Stillings, of Strasburg, showed preparations to the International Ophthalmological Congress at Mailand, in September last, which he believes demonstrate the existence of a spinal root of the optic nerve, which brings the retina into direct connection with the medulla (London Lancet). This root passes from the external corpus geniculatum, in a winding course, deep between the bundles of the crus cerebri, and can be traced into the pons; and it appears to course down in the direction of the medulla, although its further progress can not be demonstrated. The existence of this branch is interesting on account of the light it throws on certain physiological relations between the medulla and the retina, and may constitute the hitherto undiscovered link between certain diseases of the spinal cord and of the optic nerve.

Ergot of Rye in Acute Rheumatism.—At the Clinical Society of Paris Dr. Chevallereau brought forward three cases in which the subcutaneous injection of ergotine had caused a rapid diminution of the pain, and other symptoms of acute articular rheumatism (Med. Press and Circular). In the first case the ergotin was given for the relief of prolapse of the rectum, without any idea of its having any effect on the rheumatic affection from which the patient was also suffering, but to the surprise of the doctor the next day articular pains had much diminished and patient was able to move her joints. The author brings forward no theory to account for the facts, but hopes that other physicians will try the remedy.

Temperature in Diphtheria.—Extract from proceedings of the New York Pathological Society (Medical Record):

Dr. Ripley said that as a matter of fact it was not necessary to the production of albuminuria in these cases to have either lung complication or high temperature; that with low temperature, and with no lung trouble, casts were often found in the urine. As a rule, diphtheria was not accompanied with a high temperature; indeed, the worst cases had very often a low temperature.

Dr. Robinson said that it was very rare in his experience to see a case of diphtheria die from the disease uncomplicated with the lesion of some internal organ.

Dr. Ripley was surprised to hear such a statement, as patients were known to die of the poison within twenty-four hours after the invasion, and before there was time for any special lesion to show itself.

Dr. Robinson stated that he had made thirty very thorough post-mortem examinations during an epidemic of diphtheria, had watched the cases from the inception of the disease, and his statements were founded upon the facts which such a study demonstrated.

Dr. Lewis Smith remarked that in malignant cases during the first forty-eight hours the temperature was usually low. When such cases continued for four or five days they were attacked with nephritis.

Carbolic Acid in Facial Erysipelas.—Dr. Rothe observes (*Betz. Memorabilien*) that, however efficacious the subcutaneous injection of carbolic acid proves in arresting the course of erysipelas, it is not suitable when the face is the part attacked, for not only does it give rise to considerable pain, but induces a swollen and painful condition of the periphery (*Medical Times and Gazette*). For some years past he has been in the habit of using the following application: Acid. carbolic, sp. vini, each one part; ol. terebinth. two parts; tinct. iod. one part; glycerin. five parts; penciling the inflamed skin and its vicinity with it every two hours. No pain or sense of burning is produced, and the skin is usually next day pale and wrinkled. The further progress of the disease is more effectually arrested than by any other remedy, any new patches being rapidly effaced, so that in three or four days the facial erysipelas is usually at an end. The penciled places should be covered by a very thin layer of wadding. When febrile action is present the ordinary internal measures must also be resorted to.

Desiccated Ox-blood and Hemoglobine.—Dr. Le Bon, in the *Journal de Thérapeutique*, protests against the claim which Dr. Andrew Smith and others in America have made of having invented this preparation, the full description of which he had published five years since in the *Comptes-Rendus* (1875), and notices of which were given in all the French medical journals (*Med. Times and Gazette*). It has now, he states, been well tried at the Paris hospitals, and especially by Prof. Bouchut at the Children's Hospital, and has been found most efficacious in all cases in which reconstituents are required, and succeeding where the martial preparations fail. It is indicated wherever iron, raw meat, or the phosphates are useful. Hemoglobine, Dr. Le Bon says, is difficult to prepare, and in some modes of desiccation of

blood all hemoglobine is lost. He has had it prepared by a skillful chemist, and it is now in the trade. It is almost completely soluble in water, giving to this a magnificent red color. It may be given in this way or with chocolate, or in the form of powder. The American plan of adding alcohol is chemically bad, as this precipitates the albumen. Dr. Le Bon observes that all the elixirs or wines sold as containing any of the essential principles of blood or meat are an entire delusion, as they can not contain an atom of the albuminoid principles which give to meat its nutritive properties.

Jamaica Dogwood.—Dr. F. T. Montague, Crawfordsville, Ind., says of it: "I have found the Jamaica Dogwood a most valuable anodyne, relieving pain without the unpleasant after-results that we find with morphia or opium, and I most heartily indorse all that has been said of its therapeutic value." Dr. W. F. Sharrar, of Rockford, Ind., extols the same remedy in convulsions attending dysmenorrhea.

The Physiognomy of Disease.—Extract from Dr. Ambrose L. Ranney, in New York Med. Journal of December: Corfe suggests as a guide to the student in physiognomy the following table, which designates the prevailing changes in the complexion of the face in the course of the more common disorders. While it is not possible to construct any table which shall give all the information desired upon so important a subject, still this one may prove of some value as a means of aiding the memory: In cerebral disease the countenance is lethargic; in emphysema, livid; in pulmonary edema, dusky and distressed; in pneumonia, dusky and flushed; in pleurisy, pale and anxious; in phthisis, pale and thin; in malignant disease, sallow and thin; in icterus, yellow and thin; in renal disease, thin, puffy, and anemic; in peritonitis, anxious and dragged; in uterine disease, sallow and haggard.

The Pomegranate Alkaloids.—M. Dujardin-Beaumetz, in a paper read before the Académie de Médecine upon the physiological and therapeutic effects of the above, deduces the following actions (*Med. Press and Circular*): 1. They have decided physiological properties. 2. They paralyze the motor nerves, while leaving the muscular contractility intact; they do not affect the sensibility, and appear primarily to affect the motor nerves at their muscular extremities similarly with curare. 3. The sulphate of pelletierine and of isopelletierine, in the dose of thirty grams in a solution containing fifty grams of tannin, have very marked ténicidic properties. 4. This physiological action should entitle them to trial in the use of certain diseases, such as in which curare is indicated, tetanus, rabies, mania, etc., also in ocular affections, when it may be necessary to provoke congestion at the bone of the orbit, and finally in certain vertigos, particularly that of Ménière.

A New Sign of Death.—M. Peyraud, of Li-bourne, states (*Revue Méd.*) that real death may be recognized in a practical manner by the application of the Vienna caustic paste or other caustics to the skin of the subject supposed to be dead. If no eschar is produced, or if this is yellow or transparent, the subject is dead; but if it is black or reddish-brown, then the subject is still living.—*Medical Times and Gazette*.